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NATIONAL SECURITY RESEARCH DIVISION

Understanding the Cost and Quality of Military-Related Education Benefit Programs

Paco Martorell, Peter Bergman

Prepared for the Office of the Secretary of Defense

Approved for public release; distribution unlimited

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Preface

The advent of the Post-9/11 GI Bill in 2008 significantly expanded support to further education for veterans who served after the terrorist attacks of September 11, 2001. A number of other military-related education benefits support this pursuit of education as well, including the Montgomery GI Bill, Military Tuition Assistance, and the Yellow Ribbon Program. Participation in the Montgomery GI Bill has trended steadily upward over time, and this pattern will likely be reflected in the Post-9/11 GI Bill as well.

Federal sequestration has made the fiscal climate increasingly uncertain, however, and this increasing participation coupled with a more generous benefit system portends larger potential expenditures to educate veterans. With this context in mind, this report not only proposes how to assess the impact of these benefits on recruitment, retention, and ultimately, veterans' education and employment outcomes, but also strategies to improve the cost-effectiveness of these benefits.

This report should be of interest the Department of Defense, particularly as it pertains to the relationship between military-related education benefits and military readiness. It also should be of interest to the Department of Veterans Affairs, given the focus on the effects and efficiency of benefit programs on veterans' well-being.

This research was conducted within the Forces and Resources Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

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Contents

Preface	iii
Figures	vii
Summary	ix
Acknowledgments	xiii
Abbreviations	xv
 CHAPTER ONE	
Introduction	1
 CHAPTER TWO	
Military-Related Education Benefit Programs	3
Military-Related Education Benefit Programs in Context	3
Modern Education Benefit Programs: The MGIB and the Post-9/11 GI Bill	3
Changes to the Post-9/11 GI Bill	5
 CHAPTER THREE	
Empirical Patterns of MGIB Benefit Usage	7
 CHAPTER FOUR	
Research on Military-Related Education Benefit Programs	11
 CHAPTER FIVE	
Challenges Facing Policymakers	13
Concerns About Cost and Quality: The Rise of For-Profit College Attendance Among Veterans ...	13
Complexity of Educational Benefit Programs	14
Unintended Consequences of Recent Policy Changes	15
Lack of Information and Data Needed to Address These Challenges	15
 CHAPTER SIX	
Recommendations for Future Work	17
Tracking Veterans' Outcomes	17
Measuring the Impact of Educational Benefits on Veterans' College Outcomes	17
The Employment Returns on Veterans' Education	18
Measuring the Consequences of Benefit-Choice Complexity and Improving Choices	18

CHAPTER SEVEN

Conclusion 21

Bibliography 23

Figures

3.1.	Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year	8
3.2.	Fraction Who Receive Benefits Within Year of Separation, by Service Type.....	8
3.3.	Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by Race	9
3.4.	Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by AFQT Percentile.....	9
3.5.	Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by Leaving Years.....	10

Summary

Since the passage of the original GI Bill following World War II (*Serviceman's Readjustment Act*, 1944), the military has provided veterans with a collection of financial aid benefits designed to help them attend college. While research has shown that these programs have helped many veterans acquire a college education (e.g., Bound and Turner, 2002; Stanley, 2003), less is known about the impact of more recent educational benefits for veterans. This is especially true of the Post-9/11 GI Bill, which, in conjunction with a number of other assistance programs, has afforded veterans new educational opportunities. The Post-9/11 GI Bill offers tuition subsidies paid directly to institutions, a housing allowance tied to cost of living, and a book stipend, which in combination are usually more generous than preceding GI Bills. However, issues such as rising tuition costs; an increasing presence of low-quality, for-profit institutions that target veterans; and a potentially confusing array of benefit options could mitigate the impact of these programs on the recruitment, retention, and human capital development of service members.

This report contextualizes these issues and formulates a research agenda to address them. Specifically, this report addresses the following research questions:

- What are the key features of the military-related education benefit programs, including changes to these programs and historical utilization patterns of some of the key programs?
- What has been found in prior research on the impacts of these programs?
- What are the primary challenges policymakers face for improving the evaluation, implementation, and efficiency of the benefit programs?
- How can future research help overcome the challenges policymakers face?

Veterans' Educational Assistance Programs and Benefit Usage

Currently, veterans can choose from a wide selection of education benefit programs, the two most significant of which are the Montgomery GI Bill (MGIB) and the Post-9/11 GI Bill. The former offers veterans a monthly stipend of \$1,426 paid directly to students for up to 36 months, and is available to veterans serving after 1985 who are on active duty for at least three years.

The Post-9/11 GI Bill is the largest expansion of benefits since the original GI Bill (Steele, Salcedo, and Coley, 2011), with tuition assistance offsetting the net in-state tuition cost of the institution a veteran attends for up to 36 months. In contrast to the MGIB, this assistance is paid directly to the institution. The housing allowance varies by state, equaling the Basic Housing Allowance for an E-5 military paygrade with dependents.

The MGIB and Post-9/11 GI Bills are complemented by several other programs, such as the Yellow Ribbon Program, which expands the generosity of benefits for more expensive participating schools, and the MGIB-Selected Reserve and the Reserve Educational Assistance Program, which extend benefits to reservists serving on active duty for extended periods of time.

Our analysis of personnel records of service members linked to benefit participation data revealed several noteworthy patterns:

- Nearly half of all veterans separating before 2000 have claimed benefits before the option to do so expires.
- Claim rates are highest for Marines, Hispanic veterans, and those with higher Armed Forces Qualifying Test (AFQT) scores.
- Take-up rates have been increasing over time, which suggests that an even greater fraction of service members are taking advantage of the Post-9/11 GI Bill (although our data do not allow us to confirm this conjecture).

Prior Research on the Impact of Veterans' Educational Benefits

Research has found that previous GI Bills had large effects on college enrollment.

- The World War II-era GI Bill increased college attainment by 32–40 percent (Bound and Turner, 2002; Stanley, 2003).
- Stanley (2003) finds a 33 percent increase in college completion for veterans of the Korean War.
- Angrist and Chen (2011) use the Vietnam draft lotteries to compare veterans with non-veterans and find similar schooling gains as for earlier GI Bills.

These large enrollment gains for earlier GI Bills may have been facilitated by low baseline rates in college attendance. Studies of more-recent benefits have found smaller effects and changes in the composition of service members.

- Simon, Negrusa, and Warner (2010) study the effects of the MGIB and find that an additional \$10,000 in benefits leads to an increase of five percentage points in benefit use.
- MGIB benefits encourage the enlistment of individuals more motivated to go to college, which leads to higher separation rates.

To date, there has been no rigorous impact analysis of the Post-9/11 GI Bill on service members' outcomes.

Challenges Facing Policymakers

While research on the original GI Bill had important implications for policy, there is little research on the impact of the current educational assistance programs on veterans' outcomes. Several challenges for policymakers emphasize the need for improved data collection and evaluation of program impacts on the quality and quantity of education that veterans receive.

Concerns About Cost and Quality: The Rise of For-Profit College Attendance Among Veterans

For-profit colleges have grown rapidly in recent years, which is potentially problematic for several reasons:

- For-profit colleges charge relatively high tuition, which might increase the cost of veteran educational benefits.
- Current financial aid regulations indirectly incentivize for-profit colleges to recruit veterans to apply.
- There are concerns about the quality of educational offerings that for-profit colleges provide; students in for-profit colleges are less likely to complete degree programs (Lynch, Engle, and Cruz, 2010; Elgin and Silver-Greenberg, 2009) and face greater unemployment and student loan burdens (Deming, Golden, and Katz, 2012).

Complexity of Educational Benefit Programs

The complexity of benefit options and quality of outreach to inform veterans about these choices also present a challenge to policymakers.

- Certain benefit decisions are irrevocable, and there are instances in which the MGIB is more generous than the Post-9/11 GI Bill.
- Steele, Salcedo, and Coley (2011) find that 38 percent of survey respondents said understanding benefit eligibility for the Post-9/11 GI Bill was a moderate to major challenge.
- We do not know the effectiveness of existing Department of Veterans Affairs (VA) outreach programs that aim to assist veterans' decisionmaking.

Costs of the Post-9/11 GI Bill

Veterans face high tuition costs, and there is no research about the effectiveness or efficiency of the Post-9/11 GI Bill's tuition assistance program.

Lack of Information and Data Needed to Address These Challenges

Addressing these challenges will require data on benefit take-up and related costs, as well as the ability to track veterans' outcomes through their education and into the labor market. Currently, these types of data do not exist.

Recommendations for Future Work

We recommend several priorities for future research:

- Extensive data collection to help track veterans' outcomes during school and through their transitions into the labor market
- Quantifying how tuition subsidies and other benefits affect recruitment, retention, education, and labor-market outcomes
- A rigorous research design to measure the extent to which benefits affect college choice decisions and how this affects program costs

- Measuring the consequences of benefit-choice complexity on veterans' choices, financial aid, and education
- Testing interventions to reduce this complexity and improve benefit choices.

We believe this research will help guide policies that ensure programs to assist veterans provide the maximum benefit given their cost.

Acknowledgments

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The authors alone are responsible for any remaining errors in the document.

Abbreviations

AFQT	Armed Forces Qualifying Test
DoD	U.S. Department of Defense
GAO	Government Accountability Office
MGIB	Montgomery GI Bill
NCS	National Call to Service
REAP	Reserve Educational Assistance Program
VA	U.S. Department of Veterans' Affairs
9/11	September 11, 2001, terrorist attacks

Introduction

Veterans and service members are offered a wide array of benefits to encourage higher education and ease the transition back into the labor force. However, it remains unclear if these assistance programs—individually or in combination—effectively and efficiently serve their intended purposes. The increasing number of service members returning home from conflicts overseas combined with budgetary uncertainties in Congress precipitates the need for research that can shed light on the consequences of these programs and help improve the efficiency of benefit allocations. This report attempts to provide background on the institutional and policy context surrounding veterans' educational benefits, and to highlight the most pressing issues facing policymakers in this area. We also propose a research agenda that could help inform policy. Specifically, we address the following research questions:

1. What are the key features of the military-related education benefit programs, including changes to these programs and historical utilization patterns of some of the key programs?
2. What has been found in prior research on the impacts of these programs?
3. What are the primary challenges policymakers face for improving the evaluation and implementation of the benefit programs?
4. How can future research help overcome the challenges policymakers face?

We believe this research will be of interest to policymakers and members of the public with an interest in educational benefits for service members and veterans. This research will be of particular interest to the Department of Defense (DoD) and the Department of Veterans Affairs (VA). The relevance for DoD stems from the use of military-related education benefits as a recruiting tool. Understanding the extent to which these programs improve the well-being of individuals after they leave the military will help DoD devise recruiting strategies. In addition to encouraging enlistment, benefits can also shift the pool of applicants toward academically skilled service members. At the same time, these benefits may have implications for military retention policy, as they may act to improve the desirability of separating from the military. The research we propose here will shed light on the extent to which that is true. Finally, educational benefits for active-duty service members might help develop the human capital of the force. The research we propose below will help quantify these impacts.

For the VA, the relevance of this research lies in the department's longstanding interest in advocating for and fostering the well-being of veterans. Military-related education benefits may significantly improve veterans' quality of life by improving educational attainment, thereby improving employment opportunities. The research we propose here includes tracking service

members after separation to measure these outcomes, and studying how policy changes have affected them.

For both the VA and the DoD, we propose strategies to examine the efficiency of military-related education benefits and describe strategies to improve cost-effectiveness. The onset of sequestration, the increasing prevalence of low-quality, for-profit institutions, and potentially difficult benefit decisions for veterans have made efficiency and cost-savings an important priority.

Military-Related Education Benefit Programs

Military-Related Education Benefit Programs in Context

To improve upon the treatment of veterans following World War I, the GI Bill of Rights sought to help World War II veterans reintegrate into civilian life through a collection of generous benefits (*Serviceman's Readjustment Act*, 1944). Signed into law in 1944, the original GI Bill provided a range of supports: education subsidies, low-cost home and business loans, and unemployment insurance.

The educational benefits were significant. The original GI Bill offered 48 months of tuition benefits equal to \$500 per term (\$6,192 in 2010 dollars) and up to \$120 dollars per month (\$1,486 in 2010 dollars) to cover living expenses (Steele, Salcedo, and Coley, 2011). These benefits were paid directly to higher education institutions. When service eligibility ended in 1947, veterans accounted for nearly 50 percent of college admissions; by the time benefit disbursement concluded in 1956, 7.8 million veterans had taken advantage of education and training programs (VA, 2012). Overall, veterans' college-completion rates increased by 32–40 percent as a result of the original GI Bill (Bound and Turner, 2002; Steele, Salcedo, and Coley, 2011).

Over the next several decades, other veterans' assistance acts followed. In June 1952, Congress passed the Korean War GI Bill. This bill preceded the Vietnam GI Bill (1966), the Post-Vietnam Era Veterans' Educational Assistance Act (adopted in 1977) and the currently active Montgomery GI Bill (MGIB; adopted in 1984). However these acts were typically less generous than the original GI Bill, offering benefits of shorter durations and providing benefits to students as opposed to providing them to institutions directly (Steele, Salcedo, and Coley, 2011).

Despite the generosity of the MGIB and its associated benefits, rapid tuition increases have resulted in the value of these benefits falling short of the total cost of tuition and living expenses at many higher-education institutions (Steele, Salcedo, and Coley, 2011). The Post-9/11 GI Bill, passed in June 2008, sought to rectify this shortcoming by offering expanded benefits to service members who were on active duty after September 10, 2001. This bill represents the most significant expansion of benefits in the post-World War II era.

Modern Education Benefit Programs: The MGIB and the Post-9/11 GI Bill

Currently, veterans can choose from a number of education benefit programs.¹ The first is the VA's MGIB, which offers a monthly stipend of \$1,426 directly to students that can be allocated

¹ See Appendix A of Steele, Salcedo, and Coley (2011) for a summary of current and prior military-related education benefit programs.

toward tuition and other expenses. To participate, veterans must have \$100 withheld from their paycheck per month in the first 12 months of service and may contribute up to \$600 for greater future payments. Not using the benefits results in a loss of this contribution (Shakely, 2012). Most veterans serving after June 1985 are eligible to collect MGIB benefits, usually after three years of active-duty service, and these benefits must be used within ten years of release from active duty.²

The VA also provides several other programs that increase the breadth of benefits. These include the MGIB-Selected Reserve and the Vocational Rehabilitation program. The latter provides tuition, fees, and allowance benefits to disabled veterans; the former provides similar benefits as the MGIB to current reserve or National Guard service members. Finally, for reservists called to active duty after the September 11, 2001, terrorist attacks, the Reserve Educational Assistance Program (REAP) allows them to receive MGIB benefits commensurate with the benefits received by other active-duty service members (Steele, Salcedo, and Coley, 2011).

Additional assistance is provided to active-duty service members through DoD's Military Tuition Assistance. This program pays for up to 100 percent of tuition costs, not exceeding \$250 per semester credit hour and not exceeding \$4,500 per fiscal year.

The National Call to Service (NCS), also a DoD program, incentivizes a three-period consecutive term of service that includes 15 months of active duty, additional service in active duty or 24 months in the Selected Reserve, and a third period of service on active duty in the Selected or Individual Ready Reserve or in a domestic national service program. Satisfying these requirements allows service members to claim one of the following: 12 months of allowance equal to the monthly three-year MGIB rate (\$1,034) or 36 months of allowance equal to 50 percent of the MGIB rate for less than three years (\$420), coordination with MGIB benefits, a \$5,000 bonus, or repayment of up to \$18,000 in student loans. Given the latter, service members may complete their education prior to serving on active duty and still receive benefits.³

The Post-9/11 GI Bill expands the VA's education benefits for most veterans. Veterans must have served at least 90 days after September 10, 2001, to be eligible for 40 percent of benefits, which rises to 100 percent of benefits following at least 36 months of service after this date. Originally, the Post-9/11 GI Bill offered tuition payments up to the in-state tuition costs of the most expensive public institution for each state—ranging from \$93 per credit in South Dakota to \$1,471 per credit in Texas (VA, 2010). As in the 1944 GI Bill, these tuition grants are paid directly to institutions and supplemented with a book stipend of \$1,000 per year.

To support attendance at private institutions and high tuition costs elsewhere, such as out-of-state residence tuition for public institutions, colleges and universities may elect to participate in the Yellow Ribbon Program. This program stipulates the institution will pay for 50 percent of the tuition costs and fees not covered by the Post 9/11 GI Bill while the VA pays the other 50 percent of these costs. The housing allowance equals the Basic Housing Allowance for an E-5 with dependents for those enrolled at least half time and taking one course on campus—which implies that benefits vary by state, from \$801 in Ohio to \$2,701 in New

² Service members are eligible for MGIB benefits if they have completed their initial service contracts and, if they have exited from the military, received an honorable discharge. Service members must also have agreed to reduce their basic military pay by \$100 per month in the first year of service.

³ In this respect, the NCS is structured in a similar way to the Reserve Officer Training Corps program, which allows individuals to complete their schooling prior to serving.

York City (Steele, Salcedo, and Coley, 2011). A one-time relocation allowance of \$500 is also available to those who move at least 500 miles or must travel by air to attend their educational institution.

Given the potentially overlapping eligibility requirements, many veterans may be eligible for more than one set of benefits. If an individual is eligible for the Post-9/11 GI Bill and another GI Benefit, for example the MGIB, he or she must make an irrevocable choice regarding which benefit they choose to receive (VA, 2011). However this choice is only required when the decision to claim a benefit has been made. If an individual is eligible for the Post-9/11 GI Bill and two or more other benefits, he or she only has to irrevocably release one of these benefits. However, an individual may use the 36 months of benefits from the MGIB and claim an additional 12 months of Post-9/11 GI Bill Benefits (Steele, Salcedo, and Coley, 2011). Individuals who claim the NCS and the MGIB or MGIB Selected Reserve will have entitlements under the GI Bills reduced by the amounts provided under NCS. Underlining the importance and complexity of these choices, there are circumstances in which the MGIB is more generous than the Post-9/11 GI Bill. For instance, several state colleges offer free tuition and no fees for veterans. In this case, the Post-9/11 GI Bill will only help cover housing and books, which may be smaller than the stipend provided by the MGIB. More generally, if tuition costs are low enough or a service member's length of service after September 11, 2001, is short enough, the MGIB may be more generous than the Post-9/11 GI Bill. In addition, service members who have used MGIB benefits and also qualify for Post-9/11 GI Bill benefits can exhaust their remaining MGIB payments and then receive an additional 12 months of Post-9/11 financial aid. However, if a service member switches to the Post-9/11 GI Bill prior to exhausting their MGIB benefits, he or she will only receive benefits from the former for the time remaining on his or her MGIB benefits, and will not be eligible for a 12-month extension. This rule implies that it may be better for some veterans to not immediately switch irrevocably to the Post-9/11 GI Bill if the additional 12 months of benefits outweighs the gains from immediately switching.

Changes to the Post-9/11 GI Bill

The Post-9/11 Veterans Educational Assistance Improvements Act of 2010, sometimes known as the GI Bill 2.0, made several important changes to the Post-9/11 GI Bill. These changes include a cap on Yellow Ribbon tuition and fee rates of \$17,500, a housing allowance extended to distance learners equal to one-half the national average Basic Housing Allowance for an E-5 with dependents, and the elimination of break or interval pay; for instance, between a first and second semester of classes. Perhaps most significant is a change made to tuition benefits. As previously stated, the original Post-9/11 GI Bill indexed tuition benefits to the in-state tuition costs of the most expensive public university in a given state. The Improvement Act of 2010 ties tuition assistance to the net in-state tuition cost of the institution a veteran actually attends. The maximum in-state tuition per term can be substantial—for instance more than \$40,000 per year in Colorado, Kansas, Florida, and Utah—which can largely cover even out-of-state tuition costs for some public universities in the same state. This act does not allow veterans to cover out-of-state tuition costs unless the institution participates in the Yellow Ribbon Program.

Empirical Patterns of MGIB Benefit Usage

Given the increasing number of service members who are returning home and leaving the service as part of drawdowns, the remainder of this paper focuses primarily on GI Bill benefits. While there is considerable information about the details of the MGIB program, there is less information about patterns in usage. We now discuss the results of an empirical analysis that documents the growing importance of GI Bill benefits. To conduct this analysis, we used military personnel records and administrative data on benefit usage to document trends in benefit usage. In particular, these analyses examine the proportion of former service members who use the MGIB; how soon after separation they do so; how these patterns vary by subgroup; and how the patterns have changed over time.

We built a dataset from military personnel records, which come from the Proxy PER-STEMPO dataset. We merged these data with information on MGIB utilization from VA administrative files. Our sample consists of all individuals who separated from the military between 1990 and 2005.¹ Ideally, we would examine usage of the Post 9/11 GI Bill and the GI Bill 2.0, but the data that would be required for such an analysis are not yet available because the Post 9/11 GI Bill only became law in 2008. Moreover, these data cannot speak to whether veterans complete their intended course of study or to the labor market payoff of their postsecondary schooling. Nonetheless, it is useful to examine benefit take-up rates to get a sense of how widely used educational benefits are, and how these patterns vary by service member characteristics.

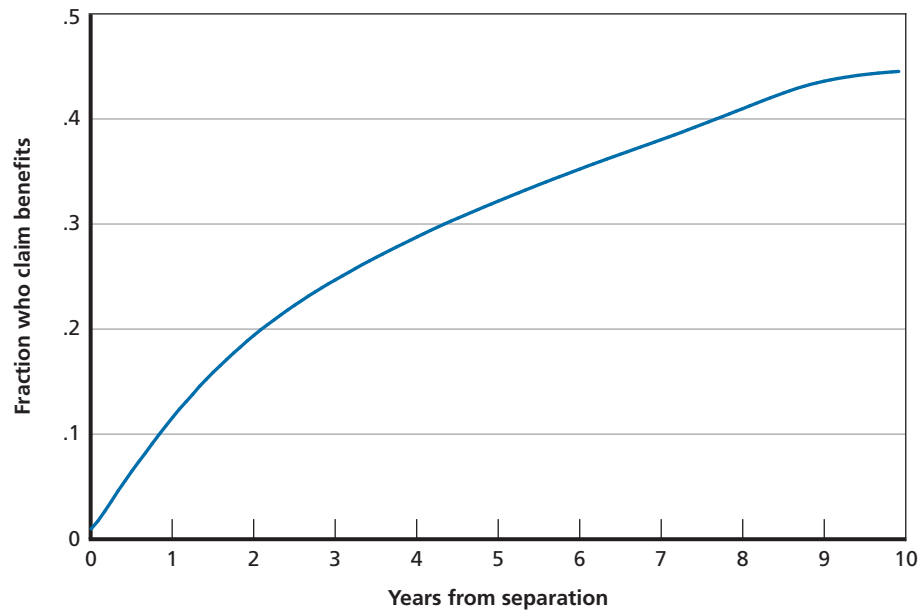
The key takeaway from this analysis is that the MGIB is a significant program, both in terms of the number of people it serves and in how much is spent on it. We estimate that for veterans who separated before the year 2000, 46 percent receive educational benefits before their eligibility expires. Figure 3.1 shows the fraction of these veterans who receive benefits within a certain year of separation. For veterans who separated before the year 2000, more than half of those who receive benefits do so within three years of separation. Figures 3.2 through 3.4 show the average benefit-receipt rates for various subgroups within a particular number of years from separation. Figure 3.2 shows that these rates are highest for Marines, while Figures 3.3 and 3.4 show these rates are greatest for Hispanic veterans and for those with higher Armed Forces Qualifying Test (AFQT) scores.² While there is some variation across these subgroups in benefit usage, overall usage is widespread and common.

Our calculations show that amounts of benefit spending per veteran, which are in nominal dollars, have increased over time. For instance, for veterans who separated in 2000, the average

¹ Our data do not allow us to identify MGIB-eligible veterans.

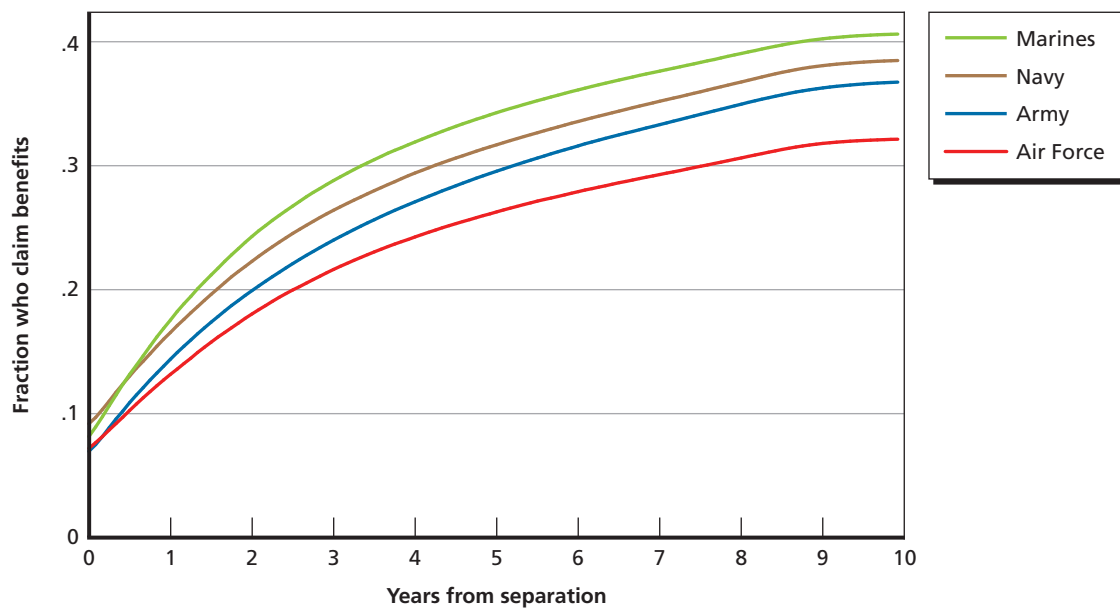
² Participation from members of the Air Force could be lower compared to members of other military branches because they have access to the Community College of the Air Force. This form of tuition assistance may not be recorded in our data.

Figure 3.1
Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year



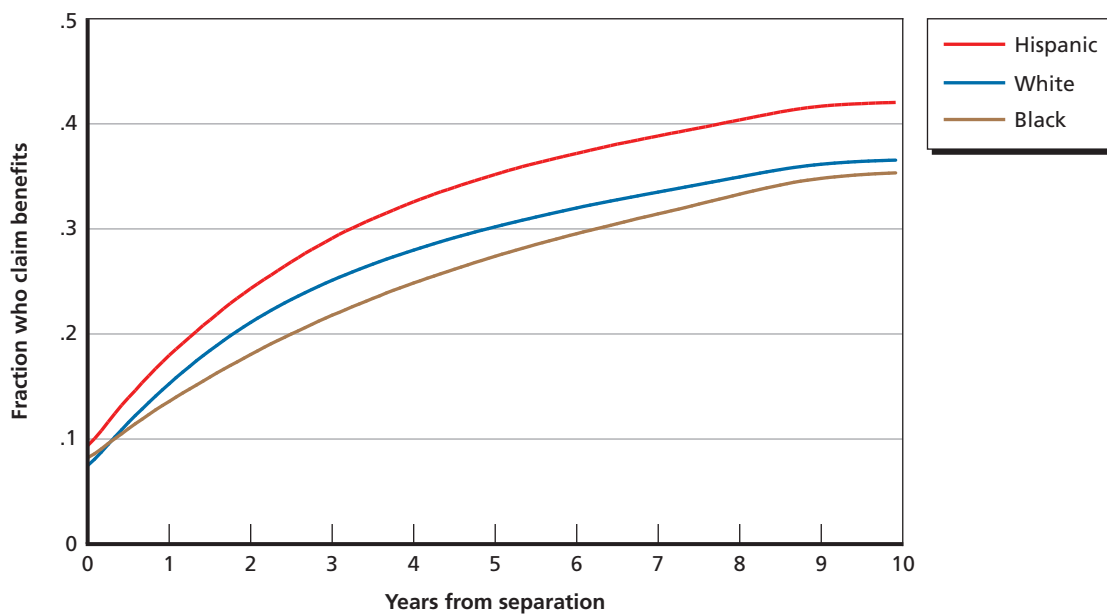
SOURCE: Authors' calculations based on Proxy PERSTEMPO data and VA administrative files.
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Figure 3.2
Fraction Who Receive Benefits Within Year of Separation, by Service Type



SOURCE: Authors' calculations based on Proxy PERSTEMPO data and VA administrative files.
RAND RR297-2

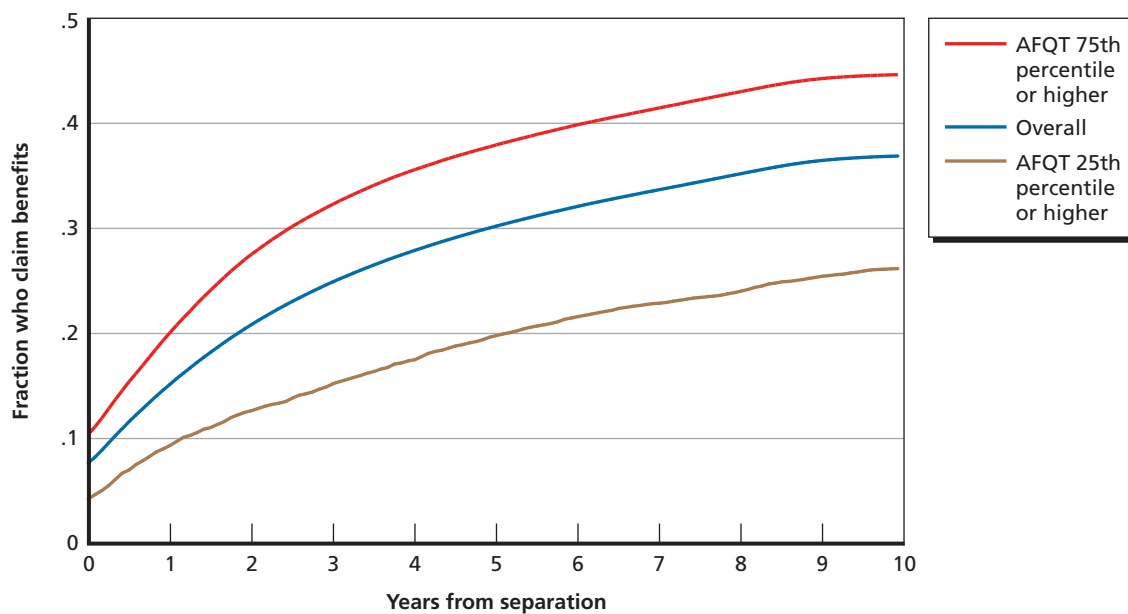
Figure 3.3
Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by Race



SOURCE: Authors' calculations based on Proxy PERSTEMPO data and VA administrative files.

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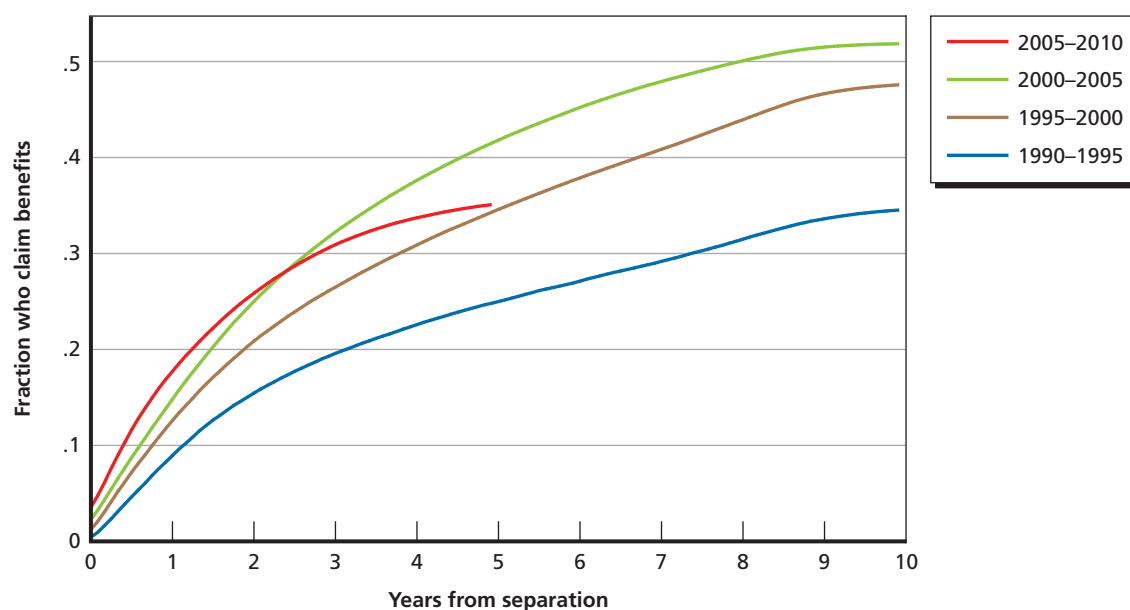
Figure 3.4
Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by AFQT Percentile



SOURCE: Authors' calculations based on Proxy PERSTEMPO data and VA administrative files.

RAND RR297-4

Figure 3.5
Cumulative Proportion Who Have Received Benefits Within Each Post-Separation Year, by Leaving Years



SOURCE: Authors' calculations based on Proxy PERSTEMPO data and VA administrative files.

RAND RR297-5

spending per veteran was \$11,101, and conditional on receiving some benefits, \$20,994; these numbers are \$5,995 and \$12,501 for veterans who separated in 1995. Across all veterans, total spending was more than \$384 million for those separating in 2000 and \$292 million for those who separated in 1995. We report these figures in nominal amounts because the MGIB benefit data do not indicate when the payments were made (only the year the benefits were initiated and the date of the last payment). This makes it impossible to convert the nominal payment amounts for inflation. However, if we were to make a crude adjustment for inflation by converting these figures to 2012 dollars by assuming all the spending took place in 1995 and 2000, these numbers translate respectively to \$512 million and \$440 million in \$2012.³

Figure 3.5 shows the fraction of service members receiving benefits according to whether they separated between 1990–1995, 1995–2000, 2000–2005, or 2005–2010. Conditional on the number of years from separation, we see increases in the take-up of benefits as the separation cohort moves 1990–1995 to 2005–2010.⁴

Overall, these trends show MGIB take-up rates have increased over time. With a projected total cost of 90 billion dollars, we anticipate that the generosity of the Post-9/11 GI Bill has likely accelerated these trends. However, our data do not allow us to examine whether or not this conjecture is true.

³ This conversion was done using the Bureau of Labor Statistics' inflation calculator.

⁴ This pattern holds true except for the 2005–2010 separation cohort. However, for veterans who separated after the year 2000, this graph likely understates the fraction of veterans who will ultimately claim benefits; many veterans who have not claimed are still eligible to claim after 2010, the last year in which benefit usage is observed in the data.

Research on Military-Related Education Benefit Programs

The discussion in the preceding section indicated that many veterans, though far from all of them, use educational assistance programs, and that outlays on these programs are considerable. We now summarize the most rigorous quantitative studies about the impact of these programs on retention, educational attainment, and labor-market outcomes. We found a number of papers on the impact of previous GI Bills on education and labor-market outcomes; but we did not find similarly rigorous studies on the impact of the Post-9/11 GI Bill. Given the significant expansion of benefits under the Post-9/11 GI Bill, this dearth of evidence stresses the need for further research. We shall discuss the challenges faced by policymakers in making these assistance programs as beneficial for veterans as possible.

Several papers have examined the impact of GI Bills on veterans' education outcomes. Studies that have examined the effect of the World War II-era GI Bill on college attainment have generally found very strong effects. In particular, estimates in the literature suggest that individuals exposed to this policy experienced an increase in college completion rates of 32–40 percent (Bound and Turner, 2002; Stanley, 2003). Evidence also suggests that a similar program in Canada led to large increases in college attainment (Lemieux and Card, 2001).

Other research has studied the educational effects related to subsequent GI Bills. For instance, Stanley (2003) uses benefit-eligibility breaks for men serving later in the Korean War and finds a 33 percent increase in college completion. Angrist and Chen (2011) use the Vietnam draft lotteries to compare veterans with nonveterans in terms of educational attainment and wages. They show schooling gains for veterans in line with estimates from the World War II-era GI Bill, and argue that these increases are due to use of the GI Bill. This attainment advantage among individuals conscripted into military service during the Vietnam War appears to have offset much of the wage penalty veterans initially faced in their civilian careers after returning from service (Angrist, 1990).

More recently, Simon, Negrusa, and Warner (2010) studied the effects of the MGIB using changes in benefit levels over time. They found that an additional \$10,000 in benefits leads to an increase of five percentage points in benefit use and that higher benefits induce individuals with a stronger desire to go to college into the military, which in turn leads to higher separation rates, particularly for the Army and Air Force. A study by Loughran et al. (2011) finds that individuals who enlist in the military are slightly more likely to earn a college degree than are comparable nonveterans who applied to the military. However, these estimates are not directly comparable to the estimates examining the impact of earlier GI Bills, as the latter studies compared individuals exposed to either the entire benefit package with those exposed to no benefits, and college attainment was lower than it is today. Thus we caution against drawing any inferences about whether the effect of educational benefits is larger or smaller today than it was in earlier periods.

Challenges Facing Policymakers

Policymakers face a number of challenges regarding the efficient provision of effective educational benefits. In particular, the context of higher education for veterans is sufficiently different from previous eras that past research showing positive effects of different GI Bills may provide limited information on the impact of the Post-9/11 GI Bill. These challenges stem from the proliferation of for-profit education institutions, complex benefit options, and rising tuition costs—circumstances that pose several challenges for policymakers and indicate the need for more information regarding the usage and impact of current educational assistance programs.

Concerns About Cost and Quality: The Rise of For-Profit College Attendance Among Veterans

Although still a relatively small part of the higher-education market, for-profit colleges have experienced very sharp growth in recent years. Between 2000 and 2010, the share of undergraduate enrollment at for-profit institutions more than tripled, and currently nearly 10 percent of all undergraduate students attend a for-profit institution (National Center for Education Statistics, 2011).

The growth of the for-profit sector is of particular concern for veterans' educational policy.¹ While federal rules stipulate that no more than 10 percent of an institution's income can come from federal financial aid, GI Bill benefits do not count against this 10 percent cap. This creates incentives for for-profits to recruit veterans. Theodore Daywalt, CEO of VetJobs, testified before the U.S. Senate that many for-profits see veterans as "dollar signs in uniform" (Daywalt, 2011). For-profits, numbering around 35,000, actively recruit at Wounded Warriors centers and veterans' hospitals (Shakely, 2012). A Government Accountability Office (GAO) report further reflects the importance of this issue, citing DoD's awareness of schools' improper recruiting concerns and the need for additional oversight to ensure that tuition assistance funds are directed toward schools that have been properly vetted (GAO, 2011b).

In and of itself, the growth of the for-profit college sector and the large numbers of veterans who enter this sector need not be a problem. In fact, for-profit colleges might offer some advantages. Proponents of for-profit education contend that they have greater flexibility and capacity than conventional public colleges to respond to changes in the skills that employers value (Gonzalez, 2009). However, there are at least two reasons why this growth might rep-

¹ The issue of for-profit colleges is not only an issue for veterans' educational benefit policy. Although they enroll only 9 percent of all college students, nearly 24 percent of federal Pell Grant spending and 25 percent of federally subsidized loans go to for-profit institutions (Eisman, 2010; U.S. Senate Health, Education, Labor, and Pensions Committee, 2010).

resent a problem for policymakers. First, they might increase the cost of veteran educational benefits; for-profit institutions typically charge significantly higher tuition than local community colleges and state universities—averaging four times the costs of community colleges for associate’s degrees and certificates. Of students starting a for-profit college, 96 percent use federal loans and account for 47 percent of all federal student-loan defaults in 2008–2009 (U.S. Senate Health, Education, Labor, and Pensions Committee, 2012).² Critics also contend that some for-profit colleges engage in unethical recruitment practices to take advantage of financial aid opportunities. For example, a 2010 General Accounting Office (GAO) report found evidence that some admissions representatives encouraged applicants to falsify their financial aid forms to qualify for federal aid (Kutz, 2010).

Second, there are concerns about the quality of educational offerings that for-profit colleges provide. For instance, for-profit colleges have been criticized recently due to allegations that students there are less likely to complete degree programs and the instructional content of their course offerings is of lower quality than at public colleges (Lynch, Engle, and Cruz, 2010; Elgin and Silver-Greenberg, 2009). Deming, Golden, and Katz (2012) find that persistence and two-year degree attainment is higher at for-profits, but that unemployment and student loan burdens are also higher.

Beyond the need to track the allocation of tuition dollars, this evidence highlights the importance of measuring the effect of education benefits on the quality of education, in addition to the quantity, that veterans receive.

Complexity of Educational Benefit Programs

A second challenge for policymakers is the complexity of benefit options and the level of outreach to inform veterans about these choices. Given that certain benefit decisions are irrevocable and there are circumstances in which the MGIB can be more generous than the Post-9/11 GI Bill, veterans require immediate understanding about the implications of their choices. Steele, Salcedo, and Coley (2011) find that, among a survey of veterans, 38 percent of respondents said understanding benefit eligibility for the Post-9/11 GI Bill was a moderate to major challenge. Focus groups offered potential reasons why, including: unawareness about benefit options; lack of understanding about the generosity of benefits under the MGIB versus the Post-9/11 GI Bill; and variability in opportunities to receive benefit-choice advice. One focus-group participant in the study was initially unaware of the option to obtain 36 months of MGIB benefits followed by 12 months of benefits from the Post-9/11 GI Bill. After he had irrevocably switched to the Post-9/11 GI Bill from the MGIB, he was nonetheless trying to switch back. Another participant had switched to the Post-9/11 GI Bill and subsequently received *less* money than under the MGIB, not having realized the length-of-service requirement to receive 100 percent of the Post-9/11 GI Bill benefits.

According to Steele, Salcedo, and Coley (2011), surveyed veterans indicated they most need information guiding the decision on switching from one benefit program to another (GAO, 2011c). Respondents said they were “left to their own devices to ‘do the math’ and figure out which benefit was best for them.” The authors go on to describe their visits to several institutions—some of which had certified officials to offer advice regarding benefits, while

² One of the biggest differences between for-profit colleges and public colleges is their cost. In 2010–2011, the average annual tuition cost at a for-profit college was \$13,935, compared with \$2,713 at a public, in-state, two-year college and \$7,605 at a public, in-state, four-year college (College Board, 2010).

others had more reticent program administrators. The latter often did not want to be liable for students' irrevocable decisions. These points are reinforced in a GAO report (2011c) stating that veterans' service organizations and school officials indicated veterans have difficulties at times determining which benefit program is best for them.

VA outreach programs, in part, attempt to assist veterans during the decisionmaking process. These programs include information provided through Transition Assistance Program briefings, telephone hotlines, and Post-9/11 GI Bill marketing campaigns on websites and social media. Despite this collection of outreach and support programs—and further assistance established through the recent passage of the Improving Transparency of Education Opportunities for Veterans Act of 2012—we do not, as of 2011, know the effectiveness of these programs, and adequate performance measures have not been established. Understanding this effectiveness is important. According to the GAO, veterans have stated that support can be inadequate because briefing presentations can be long—at times 247 slides long—and it can be difficult to reach VA staff via telephone. In September 2010, 79 percent of calls were blocked or abandoned (individuals hung up), implying veterans may have to call several times or endure long waiting times (GAO, 2011c).

Unintended Consequences of Recent Policy Changes

A third challenge for policymakers involves high tuition costs and the benefit structure of the Post-9/11 GI Bill's tuition assistance. The original version of the Post-9/11 GI Bill paid tuition up to the amount charged by the most expensive in-state public institution in the state where a veteran attended school. This created a wide-ranging amount of assistance: Veterans attending schools in states such as Florida and Kansas were eligible for more than \$40,000 in tuition in fees, while veterans in other states such as California and Idaho were eligible for less than \$3,000. For many veterans, it can be difficult to establish residency and in turn receive in-state tuition charges. The large benefits offered in some states allowed them to afford tuition costs at out-of-state colleges rather than the most expensive in the state of residency.

The Post-9/11 Veterans Educational Assistance Improvements Act of 2010, however, capped tuition benefits at the level of in-state tuition costs at the school a veteran attends, or at \$17,500 for private schools and out-of-state public-universities. Veterans who were once able to afford out-of-state tuition costs had to find a way to pay the difference. News reports publicized veterans struggling to pay tuition costs midway through their education. For example, under the previous version of the bill, one veteran attending a public institution had his entire tuition paid for at the out-of-state price, but lost a substantial amount of funding once the tuition aid was indexed under the new rules.³ A recent bill, the Restoring GI Bill Fairness Act of 2011, tries to rectify this problem by grandfathering in students negatively affected by tuition caps. The changing benefit structures among MGIB, the original Post-9/11 GI Bill, and the updated Post-9/11 GI Bill raise the question of how tuition benefits affect enrollment choices and persistence, and how many veterans were affected by the changes from the Veterans Educational Assistance Improvements Act.

Lack of Information and Data Needed to Address These Challenges

Addressing these challenges will require, at a minimum, extensive data on the take-up of educational benefits, the costs of the benefits, and the extent to which veterans succeed in their

³ See Fairbanks (2011).

chosen educational endeavors. Currently, these types of data do not exist. A recent article in the *New York Times* describes these issues, citing scant data from colleges on graduation rates and retention rates for veterans, as well as a lack of government tracking of these outcomes (Dao, 2013). In the article, Bryan Cook, director of the Center for Policy Analysis at the Council at the American Council on Education says, “The primary source of data for all students is one that looks at a small sample of first-time, full-time students, a group which most veterans do not fall into.” Meg Mitcham, director of veterans programs at the American Council on Education, touts the increasing support services offered by institutions, but stresses, “we don’t know the effectiveness of those programs and services” (Dao, 2013).

To help address these challenges, President Barack Obama issued an executive order in April 2012 to help track graduation rates of veterans who use the Post-9/11 GI Bill (Stratford, 2012). The VA has also announced a collaboration to track the progress of veterans (Brewin, 2013). Given the concerns regarding the quality of institutions that veterans attend, it is important to measure the returns to veterans’ education benefits not only in terms of education outcomes such as enrollment and persistence, but also in terms of education quality and labor-market outcomes that ultimately matter for veterans’ welfare.

Recommendations for Future Work

The challenges above point toward several related avenues for future research. We focus on research that would ultimately speak to the cost-effectiveness and efficiency of policies funded by DoD and VA. With these two aspects in mind, we outline strategies to gather the appropriate data for assessing the effects of education benefits on outcomes, the impact analyses that these data should be used for, and cost-effective strategies to improve the efficiency of existing education benefit programs.

Tracking Veterans' Outcomes

The first step that should be taken to help inform policymakers' decisions about veterans' educational benefits is to improve the collection of data tracking veterans' outcomes. This includes gathering information on educational outcomes such as those described above—enrollment and persistence rates and where veterans enroll—but also labor-market outcomes such as wage rates and unemployment rates. For example, the unemployment rate for veterans currently sits two percentage points above the national average, and one in five veterans ages 18–24 is unemployed (Zoroya, 2013). Higher education can mitigate unemployment, and tying labor-market outcomes to individual service members would help summarize the quality and quantity returns to educational assistance programs. Some of this tracking can be done with existing data that link DoD records to information on college attendance and labor-market outcomes from the National Student Clearinghouse and Social Security Administration, respectively.

From a policy standpoint, these measures would provide a simple, descriptive picture of veterans' success in and out of school. With this information, analysts could also determine tuition costs and benefit amounts for students by institution. These measures could be used to conduct a more rigorous study of what happens to service members when they return to school and the labor force.

Measuring the Impact of Educational Benefits on Veterans' College Outcomes

By the end of the Post-9/11 GI Bill's 15-year duration, program costs are expected to exceed \$90 billion, and groups such as the Student Veterans of America “want to know what the return on investment of the Post-9/11 GI Bill is” (Sander, 2012). Descriptive analyses will not be adequate to answer this question because such analyses do not inform policymakers about what would have happened to veterans in the absence of benefit programs. For example, the veterans who are eligible for educational benefits may have sought to become eligible because they have a stronger orientation toward going to college than individuals who did not seek

to satisfy the service requirements to become eligible for the benefits. Consequently, the outcomes of benefit-ineligible veterans might provide a misleading portrayal of what would have happened to eligible veterans had they not been eligible for the benefits. This type of selection problem makes it difficult to isolate the impacts of educational benefits on the college and later-life outcomes of veterans.

A rigorous analysis could be designed to overcome these selection biases, thus allowing researchers to examine the impact of eligibility for the Post-9/11 GI Bill on retention and investigate how variation in tuition subsidies has affected veterans' outcomes. For example, regression analysis and other statistical techniques can be used to account for this selection problem. These techniques should control for a rich set of covariates, and should leverage eligibility and length-of-service requirements to form a proper counterfactual for what would have happened to veterans in the absence of benefit programs.

Understanding the average effects of the programs, and which groups of veterans are most affected, would inform policymakers about the optimal size and targeting of tuition assistance. In addition, this type of analysis could be used to determine whether tuition subsidies affect the type of college attended. By making the subsidies more valuable, it is conceivable that veterans might choose higher-cost options. In fact, one criticism of for-profit colleges is that they target veterans whose benefits are especially generous (Petraeus, 2011). An appropriate research design could inform the extent to which the benefits affect college choice decisions and how this affects program costs.

The Employment Returns on Veterans' Education

Ultimately, the effect of educational benefits on the well-being of veterans depends on the extent to which these benefits translate into improved employment opportunities. Answering this question is difficult because of the selection bias issues described previously and because many beneficiaries of the new GI Bill benefits will not have completed their schooling yet, meaning it will be difficult to track the labor-market performance of these individuals.

Nevertheless, prior research has demonstrated several techniques to help determine the returns on veterans' education and skills in terms of prospective labor opportunities. For instance, one approach would be to use audit studies to measure the returns as they relate to employee characteristics. These studies can randomly vary veteran characteristics on a set of fictitious resumes such as the institution a veteran attended, field of study, and a veteran's skill set. These resumes are then mailed to potential employers. Differences in employer callback rates would provide causal estimates of what types of institutions, college majors, and experience will maximize veterans' employment opportunities. This research would quantify how veterans' skills interact with their educational attainment, type of institution attended, and kind of degree obtained to affect employment prospects, and these results would provide information to policymakers about how the labor market rewards these aspects of veterans' backgrounds, as measured by increasing the likelihood of employment.

Measuring the Consequences of Benefit-Choice Complexity and Improving Choices

Given the evidence that veterans face complex benefit options and potentially irrevocable decisions, another strand of research that would benefit policymakers would examine how well vet-

erans understand their benefit options. RAND has conducted significant research in the area of financial literacy, which has shown that complexity can be a barrier to financial planning (e.g., Brown et al., 2012). Similar research could be conducted to look at the decisionmaking of veterans as it pertains to schooling choices. For instance, this research would study veterans' benefit choices to assess how well they maximize their benefits. These choices include the decision to switch from the MGIB to the Post-9/11 GI Bill, using DoD Tuition Assistance versus GI Bill benefits, and whether veterans fail to take up available benefits during the pursuit of higher education. The results would provide insight into how well veterans are choosing the appropriate benefits for their needs and would help policymakers identify the types of veterans for whom additional information might be most helpful.

If veterans do not always make informed choices regarding their benefits and schooling, interventions regarding potential choices could provide veterans with financial assistance and improve education outcomes. Analysis of benefit choices and existing benefit-information services could determine whether veterans are “leaving money on the table.” With this information in hand, an intervention aimed at improving information services and improvements to GI Bill Benefit Calculators could be developed and evaluated using a randomized controlled trial.

Given the rise of attendance in low-quality, for-profit institutions, additional information on college quality could also be of use to veterans. Using data from tracking veterans' outcomes, it would be possible to provide veterans with information on the enrollment and graduation rates of veterans by institution type as well as average levels of student debt and subsequent labor-market returns for these institutions. This information would help service members choose colleges and optimize the use of their benefits. For example, RAND is conducting research aimed at developing a college “matching tool” that would delivered information in a convenient online format about what college choices might be suitable for a student given his or her educational background, career goals, and other characteristics. This methodology could be adapted in interventions to improve college choice decisions of veterans.

Conclusion

The rapid implementation of the Post-9/11 GI Bill and the changing landscape of higher education have raised several challenges for policymakers in terms of tracking veteran outcomes, program outreach, and evaluation. Rigorous research on earlier GI Bills had a substantial influence on policy. Changes in the higher educational context, reductions in force size, and federal budget cuts underscore the need for new research on veterans' educational benefits. Much of the data necessary to complete this research exists in disparate forms, but needs to be linked across databases and analyzed rigorously.

This report outlined the key issues facing policymakers as well as research strategies to address these challenges. We recommend that the DoD and the Veterans Benefit Administration consider the types of analyses described in this report. Research along the lines of what we have outlined here can help lead to more cost-effective programs for current and future cohorts of veterans.

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